

## Claims

1. For use in a multi-protocol Network Management System application for managing a multi-protocol layered transmissions network including a plurality  
5 of network elements, a method for generating a model of the multi-protocol layered transmissions network, the method comprising the steps of:
  - (a) determining the protocol layers in the multi-protocol layered transmissions network; and
  - (b) for each protocol layer, mapping out an overlay including  
10 the network elements operative in the protocol layer, and at least one physical link and/or the logical links interconnecting pairs of network elements where transport service along a logical link is at least partially provided by a transmission path on a protocol layer directly underlying the protocol layer, and  
15 the pair of association links between each logical link and its associated transmission path.
2. The method according to claim 1 and further comprising the step of displaying on a GUI an overlay of one protocol layer of the model with  
20 different technologies employed therein being displayed in visually distinctive manners.
3. The method according to either claim 1 or 2 and further comprising the step of displaying on a GUI a top view of the overlays of two or more protocol  
25 layers of the model superimposed one on the other.
4. The method according to any one of claims 1 to 3 and further comprising the step of displaying a 3D representation on a GUI of overlays of two or more protocol layers of the model including the pair of association links between  
30 each logical link and its associated transmission path.

5. A method according to claim 1, operative to distinguish between alarms generated at a client protocol layer and those generated and any of the underlying protocol layers.
- 5 6. A method according to claim 1, operative to allow the selection of a path in the multi-protocol layered transmissions network by using at least one selection criterion for the path to be provisioned.
7. A method according to claim 6, wherein said at least one selection  
10 criterion is selected from the group comprising: distance of transmission, delay allowed in receiving the transmission, degradation of the transmitted signals, protection constrains, or any combination thereof.
8. A system comprising a processor capable of carrying out the method of  
15 claim 1.